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CLASSIFICATION OF SUBJECT MATTER C 7 CO7K16/30 C12N C12N5/28 G01N33/574 G01N33/577 C12N15/08 A61K47/48 A61P35/00 A61K51/10 A61K39/395 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 C07K Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) BIOSIS, EPO-Internal, SEQUENCE SEARCH, WPI Data, PAJ, MEDLINE, EMBASE C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to daim No. X WO 01 83560 A (ICHIKAWA KIMIHISA ;KIMBERLY 1-6, 13,ROBERT P (US); KOOPMAN WILLIAM J (US);) 14, 17-20, 8 November 2001 (2001-11-08) 26 - 53abstract page 1, line 25 - line 31 page 3, line 7 - line 9 page 4, line 25 - line 28 page 5, line 20 - line 30 page 5, line 22 - line 25 page 6, line 3 - line 5 page 6, line 25 - line 27 page 12, line 18 - line 31 page 20, line 1 - line 8 page 29, line 27 - line 28 page 30, line 17 - line 29 page 35, line 6 - line 11 page 36, line 15 - line 17 page 58, line 1 - line 2 Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: 'T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the *A* document defining the general state of the art which is not considered to be of particular relevance 'E' earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone 'L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled 'O' document referring to an oral disclosure, use, exhibition or other means in the art. 'P' document published prior to the international filing date but later than the priority date claimed '&' document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 28/11/2003 3 November 2003 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,

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Internations ation No PCT/IB 03/01335

C.(Contlete	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	PCT/IB 03/01335
Category *		Relevant to claim No.
x	WO 97 13844 A (CAMBRIDGE ANTIBODY TECH; TEMPEST PHILIP RONALD (GB); THOMSON JULIA) 17 April 1997 (1997-04-17) figures 1,2,19 page 17, line 25 -page 18, line 21 page 1, line 8 - line 11 page 38, line 6 - line 9 page 38, line 16 - line 20 claims 1-34	9,12-16, 21,22, 26,52,53
X	WO 01 62932 A (AMGEN INC) 30 August 2001 (2001-08-30) claim 9	23,26
X	EP 1 106 183 A (GENENTECH INC ;REGENTS BOARD OF (US)) 13 June 2001 (2001-06-13)	3,6, 12-14, 16, 29-33, 36-41, 44-49, 52,53
	page 9, line 23 - line 30 page 17, line 15 - line 24 page 24, line 46 - line 55 page 5, line 5 - line 7 page 10, line 38 - line 44 page 14, line 26 - line 34	32,33
X	BRAENDLEIN STEPHANIE ET AL: "Characterization of five new fully human monoclonal IgM antibodies isolated from carcinoma patients" PROCEEDINGS OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH ANNUAL, vol. 43, March 2002 (2002-03), page 970 XP001155782 93rd Annual Meeting of the American Association for Cancer Research; San Francisco, California, USA; April 06-10, 2002, March, 2002 ISSN: 0197-016X the whole document	1-53
X	BRAENDLEIN STEPHANIE ET AL: "Human monoclonal IgM antibodies with apoptotic activity isolated from cancer patients." HUMAN ANTIBODIES, vol. 11, no. 4, 2002, pages 107-119, XP009020163 ISSN: 1093-2607 the whole document	1-53

Internation stion No
PCT/IB 03/01335

C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	<u> </u>
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	MENG RAYMOND D ET AL: "p53-independent upregulation of KILLER/DR5 TRAIL receptor expression by glucocorticoids and interferon-gamma" EXPERIMENTAL CELL RESEARCH, vol. 262, no. 2, 15 January 2001 (2001-01-15), pages 154-169, XP002260126 ISSN: 0014-4827 the whole document	1-53
Α	HUANG YING ET AL: "Sulindac sulfide-induced apoptosis involves death receptor 5 and the caspase 8-dependent pathway in human colon and prostate cancer cells" CANCER RESEARCH, vol. 61, no. 18, 15 September 2001 (2001-09-15), pages 6918-6924, XP002260127 ISSN: 0008-5472 the whole document	1-53
	·	

International application No. PCT/IB 03/01335

INTERNATIONAL SEARCH REPORT

·Box I	Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)					
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:						
1. X	Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:					
	Although claims 36-51 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.					
2.	Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:					
3.	Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).					
Box II	Observations where unity of Invention is lacking (Continuation of Item 2 of first sheet)					
This Inte	ernational Searching Authority found multiple inventions in this international application, as follows:					
1.	As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.					
2.	As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.					
3.	As only some of the required additional search fees were timely paid by the applicant, this international Search Report covers only those claims for which fees were paid, specifically claims Nos.:					
4.	No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the daims; it is covered by claims Nos.:					
Remark	The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.					

Information on patent family members

PCT/IB 03/01335

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 0183560	A	08-11-2001	AU	5936601 A	12-11-2001
			CA	2407965 A1	08-11-2001
			CN	1440424 T	03-09-2003
			CZ	20023917 A3	14-05-2003
			EP	1287035 A1	05-03-2003
,			NO	20025253 A	18-12-2002
			WO	0183560 A1	08-11-2001
WO 9713844	Α	17-04-1997	AT	190650 T	15-04-2000
-			ΑT	199091 T	15-02-2001
			AU	702049 B2	11-02-1999
			ΑU	7140596 A	30-04-1997
			CA	2233042 A1	17-04-1997
			DE	69607191 D1	20-04-2000
			DE	69607191 T2	28-09-2000
			DE	69611766 D1	15-03-2001
			DE	69611766 T2	02-08-2001
			DK	945464 T3	07-05-2001
			EP	0853661 A1	22-07-1998
			EP	0945464 A1	29-09-1999
			ES	2146020 T3	16-07-2000
			ES	2156035 T3	01-06-2001
			WO	9713844 A1	17-04-1997
			GB	2305921 A ,E	
			GR	3033436 T3	29-09-2000
			GR	3035775 T3	31-07-2001 25-01-2000
			JP PT	2000500643 T	
			PT	853661 T 945464 T	31-08-2000 31-07-2001
				945464 1	31-07-2001
WO 0162932	Α	30-08-2001	US Au	2003103978 A1	05-06-2003 03-09-2001
				3868001 A	
			CA EP	2400929 A1 1257648 A1	30-08-2001 20-11-2002
•			JP	2003523772 T	12-08-2003
			WO	0162932 A1	30-08-2001
EP 1106183	A	13-06-2001	 ЕР	1106183 A2	13-06-2001
	••	10 00 2001	ĀŪ	4982097 A	15-05-1998
			BR	9712410 A	19-10-1999
			CN	1234072 A	03-11-1999
			EP	0931147 A1	28-07-1999
•			JP	2001504326 T	03-04-2001
			JР	2001302540 A	31-10-2001
			KR	2000049261 A	25-07-2000
			TR	9901615 T2	22-11-1999
			WO	9817797 A1	30-04-1998
			ZA	9709185 A	14-04-1999